REMARKS

Summary of Rejections

In paragraph 2 of the office action, claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Hemes (USA 2004-0182483). The Heymes application claims priority from the United States Provisional Patent Application having serial number 60/446,993 filed on February 13, 2003.

In paragraph 4 of the office action, claims 1-8 are rejected under 35 U.S.C. 103(a) as being obvious in light of Hunt et al (US 5,221,377). In paragraph 7 of the office action, the Examiner states that "Applicant's argument that the present invention is allowable over the prior art of record because the instant specification has clearly shown unexpected results with regard to removing material prior to solution heat treating has not been found persuasive because there is 'no adequate basis for reasonably concluding that the great number and variety of compositions included in the claims would behave in the same manner as the tested composition' ".

Discussion

In paragraph 6 of her Office Action, the Examiner noted that she had not received a 1.131 affidavit showing the instant invention pre-dates the date of Heymes (USA 2004-0182483). The Examiner is respectfully requested to find a 1.131 declaration attached to this amendment. In the declaration, it is stated that the present invention was invented by ALCOA personnel prior to February 13, 2003, the priority date of Heymes.

It was also stated in the declaration that a proposal including cost data for the invention was sent to Boeing Aircraft Company on or before January 9, 2003, and that an E-mail was sent by Boeing to Alcoa on February 6, 2003, showing that Boeing personnel reviewed and responded to the ALCOA proposal prior to February 13, 2003. Accordingly, the Examiner is respectfully requested to withdraw her rejection of claims 1-8 based on Heymes (USA 2004-0182483).

Regarding the rejection of claims 1-8 under 35 U.S.C. 103(a) as being obvious in light of Hunt et al (US 5,221,377), claim 1 has been amended to emphasize improved control of quench rate as a result of machining prior to solution heat treatment. Step (d) in this amendment has also been changed to emphasize that quenching follows solution heat treating. This does not add new information because paragraph (3) of the specification states that quenching follows solution heat treatment.

A person skilled in the heat transfer arts will recognize that machining of a product which results in thinner cross-section will increase the rate at which its internal temperature profile changes to match its surface temperature. Thus, improved control of the quench rate is provided by removing material prior to solution heat treatment and quenching.

It is believed that the ability to control the quench rate is inherently useful to persons producing the product. It is believed that this ability is new, useful and only obvious in hindsight. Thus, it is believed that claim 1, as amended above, is patentable, and the Examiner is respectfully requested to withdraw her rejection of claim 1 under 35 U.S.C. 103(a).

Inasmuch as claims 2-8 depend from claim 1 and have all the limitations of claim 1, they are also believed to be patentable. The Examiner, therefore, is respectfully requested to withdraw her rejection of claims 2-8 under 35 U.S.C. 103(a).

In the amendment made supra, new claim 12 was introduced. The emphasis of this claim is on the processing time. A person skilled in the heat transfer arts will recognize that the product can be brought up to the temperature for solution heat treatment more rapidly, and can be quenched from that temperature more rapidly if it is machined to near net shape prior to solution heat treatment. Thus, machining prior to solution heat treatment results in shorter processing times. It is believed that this ability is new, useful and only obvious in hindsight. Thus, the Examiner is respectfully requested to allow claim 12.

In the amendment made supra, new claim 13 was introduced. Claim 13 is introduced in response to the Examiner's statement in paragraph 7 of the Office Action, that there is "no adequate basis for reasonably concluding that the great number and variety of compositions included in the claims would behave in the same manner as the tested composition". Accordingly, claim 13 is limited to the AA 7XXX series of alloys. Due to the similar compositions of the AA 7XXX series of alloys, it is believed that the tests presented in the disclosure, on the AA 7085 alloy, indicate similar improvements in those alloys, when more rapid quenching is practiced. Accordingly, the Examiner is respectfully requested to allow claim 13.

In the amendment made supra, new claim 14 was introduced. Claim 14 depends from claim 13, and applies only to the AA 7085 alloy. This is the alloy that was tested, as described in the specification. Thus, it is believed that this claim is allowable, and the Examiner is respectfully requested to allow claim 14.

As a result of the amendments to the claims made supra, it is believed that the application is now in condition for allowance. An early notice of allowance is earnestly solicited. If the Examiner has further questions regarding the case, she is respectfully invited to call the Agent for the applicants at (724) 337-6165.

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